

Christian Caprara, Dr. sc. nat.

Curriculum Vitae

Personal Information

Date of Birth: 31 December 1983 E-mail: caprara.gigh@gmail.com
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Education and Professional Experience

- 2014 – present: **Post-doctoral scientist / Lab unit production, Swiss Stem Cell Foundation, Gentilino / Zürich, Switzerland**
 - Development and validation of manual and automated mesenchymal stem cell isolation and cryopreservation methods
 - Research in mesenchymal stem cell differentiation on bioengineered materials
 - Experience working under GMP conditions in clean rooms and elaboration of GMP documentation
- 2009 – 2014 **PhD student at the Lab for Retinal Cell Biology, Dept of Ophthalmology, University Hospital Zürich, Switzerland**

PhD Thesis: "Defining the Roles of Hypoxia-Inducible Factor 1a and Erythropoietin in Retinal Physiology and Development", supervised by Prof. Dr. Christian Grimm

PhD Program in Integrative Molecular Medicine (imMed), Life Science Zürich Graduate School
- 2007 – 2008 **Master of Science (M.sc.) UZH in Biology, Molecular and Cellular Biology University of Zurich, Switzerland**

Master Thesis: "Role of Palmitoylation and Ubiquitination for the Trafficking of the Cation-Dependent Mannose-6-Phosphate Receptor", supervised by Prof. Dr. Jack Rohrer
- 2004 – 2007 **Bachelor of Science (B.sc) UZH in Biology, minor subject Biochemistry University of Zurich, Switzerland**
- 1999 – 2003 Liceo Cantonale, Bellinzona, Switzerland

Publications

Original Research Articles

- Samardzija M, [Caprara C](#), Heynen SR, Willcox DeParis S, Meneau I, Traber GL, Agca C, von Lintig J, Grimm C. A mouse model for studying cone photoreceptor pathologies. Invest Ophthalmol Vis Sci. **2014** Jul 17. pii: IOVS-14-14789
- [Caprara C](#), Britschgi C, Samardzija M, Grimm C. The erythropoietin receptor is not required for the development, function, and aging of rods and cells in the retinal periphery. Mol Vis. **2014** Mar 14;20:307-24
- Agca C, Gubler A, Traber G, Beck C, Imsand C, Ail D, [Caprara C](#), Grimm C. p38 β MAPK signalling acts upstream of LIF-dependant neuroprotection during photoreceptor degeneration. Cell Death Dis. **2013**, Sep 5;4:e785
- Heynen SR, Meneau I, [Caprara C](#), Samardzija M, Imsand C, Levine EM, Grimm C. CDC42 is required for tissue lamination and cell survival in the mouse retina. PLoS One. **2013**;8(1):e53806.
- DeParis S, [Caprara C](#), Grimm C. Intrinsically photosensitive retinal ganglion cells are resistant to N-methyl-D-aspartic acid excitotoxicity. Mol Vis. **2012**;18:2814-27
- Lange C, Heynen SR, Tanimoto N, Thiersch M, Le YZ, Meneau I, Seeliger MW, Samardzija M, [Caprara C](#), Grimm C. Normoxic activation of hypoxia-inducible factors in photoreceptors provides transient protection against light-induced retinal degeneration. Invest Ophthalmol Vis Sci. **2011** Jul 29;52(8):5872-80
- [Caprara C](#), Thiersch M, Lange C, Joly S, Samardzija M, Grimm C. HIF1A is essential for the development of the intermediate plexus of the retinal vasculature. Invest Ophthalmol Vis Sci. **2011** Apr 4;52(5):2109-17
- Lange C, [Caprara C](#), Tanimoto N, Beck S, Huber G, Samardzija M, Seeliger M, Grimm C. Retina-specific activation of a sustained hypoxia-like response leads to severe retinal degeneration and loss of vision. Neurobiol Dis. **2011** Jan;41(1):119-30

Review Articles

- [Caprara C](#), Grimm C. From oxygen to erythropoietin: relevance of hypoxia for retinal development, health and disease. Prog Retin Eye Res. **2012** Jan;31(1):89-119.

Conferences

Oral Presentations

- Swiss Eye Research Meeting (SERM)
January 24-25, **2013**
Biel, Switzerland
Intrinsically photosensitive retinal ganglion cells are resistant to N-methyl-D-aspartic acid excitotoxicity
- XX Biennial Meeting of the International Society for Eye Research (ISER)
July 21-25, **2012**
Berlin, Germany
Invited Speaker
Hypoxia-Inducible Factors in retinal angiogenesis and neuroprotection
- Swiss Eye Research Meeting (SERM)
January 27-28, **2011**
Biel, Switzerland
HIF1A is essential for the development of the retinal vasculature

Poster Presentations

- 3D Cell Culture Symposium (DECHEMA)
June 25 – 27, **2014**
Freiburg, Germany
New defined cell culture conditions in combination with a 3D scaffold for ASCs bone tissue engineering
- 9th Symposium of the Zürich Center for Integrative Human Physiology (ZIHP)
August 23, **2013**
Zürich, Switzerland
The Erythropoietin Receptor is not required for retinal function, development, and survival
- 12th Day of Clinical Research, University Hospital Zürich
April 4, **2013**
Zürich, Switzerland
The Erythropoietin Receptor in retinal physiology, development and its implication in neuroprotection
- 7th Symposium of the Zürich Center for Integrative Human Physiology (ZIHP)
August 28, **2011**
Zürich, Switzerland
HIF1A is essential for the development of the intermediate plexus of the retinal vasculature
- 6th retreat of the PhD Program in Integrative Molecular Medicine (ImMed)
June 15-16, **2011**
Kleine Scheidegg/Jungfrauoch, Switzerland
HIF1A is essential for the development of the intermediate plexus of the retinal vasculature
- 10th Day of Clinical Research, University Hospital Zürich
June 9, **2011**
Zürich, Switzerland
HIF1A is essential for the development of the intermediate plexus of the retinal vasculature
- Annual Meeting of the Association for Research in Vision and Ophthalmology (ARVO)
May 2-6, **2010**
Fort Lauderdale (FL), USA
HIF1A is required for the development of the retinal vasculature
- 9th Day of Clinical Research, University Hospital Zürich
April 8, **2010**
Zürich, Switzerland
HIF1A is required for the development of the retinal vasculature

Technical Skills

- Molecular biology: molecular cloning, RNA isolation, cDNA synthesis, semi-quantitative real-time PCR, immunoblotting, *in situ* hybridization, generation of cDNA expression libraries, ELISA
- Cell biology: cell culture of primary cell lines, FACS, immunohistochemistry, immunofluorescence
- Microscopy: confocal microscopy, laser-capture micro-dissection
- GMP (human stem cell isolation in clean room, elaboration of GMP documentation)
- *In vivo* studies (mouse)
- Informatics: MAC OSX, PC Windows, Microsoft Office (Word, Excel, Powerpoint), Adobe Illustrator, Adobe Photoshop, GraphPad Prism, Bitplane Imaris

Linguistic Skills

English	excellent reading, writing and verbal abilities
German	excellent reading, and verbal abilities; good writing abilities
French	good reading, verbal, and writing abilities
Italian	native speaker

Teaching Duties

- Tutorship at the practical course in physiology II for medicine student (B.sc.) **2010**
- Substitute teacher in secondary school for science classes **03 – 05.2009**
- Tutorship at the practical course in inorganic chemistry for biology students (B.sc.) **2005/6**